

REMARKS

Claims 1-33 are pending in the present application.

I. ARGUMENTS

A. Rejection of Claims 1, 11-12, and 22-23 under 35 U.S.C. §102(b)

Claims 1, 11-12, and 22-23 have been rejected under 35 U.S.C. §102(b) as being anticipated by Miyake (US-A-5,408,197). This rejection under 35 U.S.C. §102(b) over Miyake is respectfully traversed.

As respectfully submitted above, the present invention is directed to a power detector/controller for wireless handsets that use a modulation scheme having a non-constant amplitude envelope. This embodiment, as set forth in independent claim 1, includes a power amplifier having an input to receive a input signal with non-constant amplitude envelope and an output to output an amplified input signal, wherein either output power or gain of the power amplifier is controlled by a power amplifier control signal; an output demodulating detector coupled to the output of the power amplifier to generate a feedback signal proportional to the amplified input signal's power, the feedback signal including an AM variation due to the non-constant amplitude envelope; and a summing junction to receive the feedback signal, a ramp control signal that indicates either a target gain or target output power of the power amplifier, and an AM variation signal that represents the AM variation in the power of the input signal due to the non-constant amplitude envelope. The summing junction combines the feedback signal, the ramp control signal and AM variation signal to produce the power amplifier control signal such that the power amplifier control signal substantially free of any AM variation due to the non-constant envelope.

Moreover, as respectfully submitted above, the present invention is directed to a wireless handset for a mobile communication system that uses a modulation scheme having a non-constant amplitude envelope. This embodiment, as set forth in independent claim 12, includes a power amplifier having an input to receive a input signal with non-constant amplitude envelope and an output to output an amplified input signal, wherein either output power or gain of the power amplifier is controlled by a power amplifier control signal; an output demodulating detector coupled to the output of the power amplifier to generate a feedback signal proportional

to the amplified input signal's power, the feedback signal including an AM variation due to the non-constant amplitude envelope; and a summing junction to receive the feedback signal, a ramp control signal that indicates either a target gain or target output power of the power amplifier, and an AM variation signal that represents the AM variation in the power of the input signal due to the non-constant amplitude envelope. The summing junction combines the feedback signal, the ramp control signal and AM variation signal to produce the power amplifier control signal such that the power amplifier control signal substantially free of any AM variation due to the non-constant envelope.

Lastly, as respectfully submitted above, the present invention is directed to a RF power amplifier module for signals having a modulation scheme with a non-constant amplitude envelope. This embodiment, as set forth in independent claim 23, includes a power amplifier having an input to receive a input signal with non-constant amplitude envelope and an output to output an amplified input signal, wherein either output power or gain of the power amplifier is controlled by a power amplifier control signal; an output demodulating detector coupled to the output of the power amplifier to generate a feedback signal proportional to the amplified input signal's power, the feedback signal including an AM variation due to the non-constant amplitude envelope; and a summing junction to receive the feedback signal, a ramp control signal that indicates either a target gain or target output power of the power amplifier, and an AM variation signal that represents the AM variation in the power of the input signal due to the non-constant amplitude envelope. The summing junction combines the feedback signal, the ramp control signal and AM variation signal to produce the power amplifier control signal such that the power amplifier control signal substantially free of any AM variation due to the non-constant envelope.

In formulating the rejection, the Examiner alleges that Miyake discloses a power amplifier (Examiner notes Figure 13, amplifier 2 of Miyake) having an input to receive a input signal with non-constant amplitude envelope and an output to output an amplified input signal, wherein either output power or gain of the power amplifier is controlled by amplifier control signal (Examiner notes Figure 13, signal 12 of Miyake); an output demodulating detector (Examiner notes Figure 13, detector 5 of Miyake) coupled to the output of the power amplifier (Examiner notes Figure 13, amplifier 4 of Miyake) to generate a feedback signal proportional to the amplified input signal's power, the feedback signal including an AM variation due to the

non-constant amplitude envelope (Examiner notes generally to column 1, line 15 to columns 8-9 of Miyake); and a summing junction (62) to receive the feedback signal, a ramp control signal that indicates either a target gain or target output power of the power amplifier, and an AM variation signal that represents the AM variation in the power of the input signal due to the non-constant amplitude envelope. The Examiner further alleges that Miyake discloses that the summing junction combines the feedback signal, the ramp control signal and AM variation signal to produce the power amplifier control signal such that the power amplifier control signal substantially free of any AM variation due to the non-constant envelope (Examiner notes column 9, line 6-25 of Miyake). These positions by the Examiner are respectfully traversed.

Miyake teaches a device that controls the transmitting power of a modulated radio frequency signal. According to the teachings of Miyake, a signal 1 is received by a variable gain amplifier 2 of Figure 13, not a power amplifier, as alleged by the Examiner (See Column 9, lines 17-18). Moreover, Miyake teaches at column 9, lines 3-21, that the variable gain amplifier is controlled in response to the manipulation of the AC component fetched by coupler 50, an inverted version of the fetched AC component, and a reference voltage from a reference voltage generator. Miyake fails to teach the use of an AM variation signal that represents the AM variation in the power of the input signal. More specifically, Miyake is void of any teachings that would disclose or suggest using a signal representing the AM variation in the power of the input signal because Miyake fails to teach the monitoring of any characteristics of the input signal, all monitoring is of the output signal from power amplifier 3 of Miyake.

In summary, Miyake fails to disclose or suggest:

- (1) a power amplifier as set forth by independent claims 1, 12, and 23; and/or
- (2) a summing junction that combines the feedback signal, the ramp control signal and AM variation signal to produce the power amplifier control signal such that the power amplifier control signal substantially free of any AM variation due to the non-constant envelope as set forth by independent claims 1, 12, and 23.

With respect to dependent claims 11 and 22, the Applicant, for the sake of brevity, will not address the specific reasons supporting patentability for these individual dependent claims, as these claims depend directly or indirectly from allowable independent claims 1 and 12. The Applicant reserves the right to address the patentability of these dependent claims at a later time,

Patent Application Number: 10/055,577

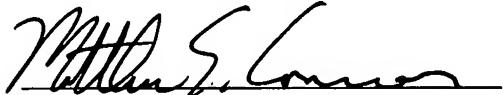
should it be necessary. It is respectfully noted that the Applicant's reservation to address the patentability of each dependent claim at a later time is not an admission that these limitations are well known in the art.

Accordingly, in view of the remarks set forth above, the Examiner is respectfully requested to reconsider and withdraw this rejection under 35 U.S.C. §102(b) to claims 1 11-12, and 22-23.

CONCLUSION

Accordingly, in view of all the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw all the present rejections. Also, an early indication of allowability is earnestly solicited.

Respectfully submitted,



Matthew E. Connors
Registration No. 33,298
Gauthier & Connors
225 Franklin Street, Suite 3300
Boston, Massachusetts 02110
Telephone: (617) 426-9180
Extension 112

MEC/MJN/mjn